

Attorney's Docket: 2003DE130
Serial No.: 10/571,478
Art Unit 1755
Response to Office Action, Dated 05/23/2007

Remarks

The Office Action mailed May 23, 2007 has been carefully considered together with each of the references cited therein. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. Accordingly, reconsideration of the present Application in view of the following remarks is respectfully requested.

Applicant has amended the claims to more clearly recite what Applicant believes to be the invention. Applicant has amended claim 1 to incorporate the contents of originally filed claim 4 into claim 1. Support for this amendment may be found in originally filed claims 1 and 4. Claims 6, 9 and 12 were amended to address formal issues of antecedent basis. Support for the amendments to claims 6, 9, and 12 may be found in originally filed claims 6, 9, and 12. It is believed that no new matter was introduced by this amendment.

The rejection of claims 1-9 and 12-13 as amended under 35 U.S.C. §112, second paragraph, for not pointing out and distinctly claiming the subject matter which Applicant regards as the invention should be withdrawn in view of Applicant's amendments which resolved the meaning of disazo pigment of formula (1) and the antecedent basis issues in claims 6, 9 and 12. Claims 10 and 11 were rejected under 35 U.S.C. §112, second paragraph, for not pointing out and distinctly claiming the subject matter which Applicant regards as the invention for the use of the word "high" in the term 'high molecular weight organic material or medium'. Applicant respectfully traverses, the term "high" as used in the claim and as defined in Applicant's Specification at page 1, lines 15/16, page 5, lines 30-33, page 6, lines 3-24 refers to a high molecular weight organic material such as a plastic or an ink and provides an entire paragraph of examples (See page 6, lines 3-19). Clearly anyone skilled in the art would understand the meaning of the term "high molecular weight organic material or medium" in defining a class of materials, and furthermore '...an inventor may define specific terms used to describe invention, but must do so "with reasonable clarity, deliberateness, and precision" and, if done, must "set out his uncommon definition in some manner within the patent disclosure" so as to give one of ordinary skill in the art notice of the change" in meaning'[MPEP 2111.01(IV)].

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Clearly, Applicant is not using the term "high" independently to define a range of molecular weight materials, but as an adjective modifier in a term which refers to an entire class of materials, examples of which are disclosed in the Specification and specific examples are provided. Therefore, rejection of claims 10 and 11, under 35 U.S.C. §112, second paragraph, for not pointing out and distinctly claiming the subject matter which Applicant regards as the invention should be withdrawn for the reason that the term is part of another term which refers to an entire class of materials which Applicant was unable to describe in any other way, and for the reason that the term is clearly defined and is not indefinite to one skilled in the art in view of Applicant's Specification, and for the reason that Applicant is acting as his own lexicographer to define the term "high molecular weight organic material" with in the normal meaning of the words in a manner that is clear to anyone skilled in the art.

Claims 1, and 5-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,284,035 to Reisacher et al. The rejection of claim 1 as amended under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,284,035 to Reisacher et al. (Reisacher) should be withdrawn for the reason that the Reisacher is silent on Applicant's combination of an organic pigment with an inorganic pigment, and no one skilled in the art would be able to predict Applicant's showing of unexpected results of a remarkably higher fastness to overcoating than the combinations disclosed in the Reiacher reference. Applicant's invention is directed to a combination of an organic pigment (PY 213, PY 214, and formula 1) with an inorganic pigment (PY 162, 163, 53, 184, etc.) which Applicant has shown to provide a remarkably higher fastness to overcoating than the combinations disclosed in Reisacher, for example see Reiacher's Example 1, which discloses a combination of PY 138 and PY 184. Attached to this paper is a Declaration under 37 C.F.R. 1.132 by Gerhard Wilker, one of the named inventors, providing a side-by-side comparison of the combination disclosed in the Reisacher Patent with the combination disclosed and claimed in the instant application. In the declaration, the pigment combination of the instant invention showed significantly less bleeding

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(staining, as measured by spectrophotometer readings of dE values) into a white overpainted coating compared to the combination disclosed in the Reisacher Patent.

As described in the attached Declaration:

The following pigment compositions were tested:

P.Y. 184 + P.Y. 138 (1:1) [according to US 6284035]

in comparison to

P.Y. 184 + P.Y. 213 (1:1) (present invention)

Test criteria: Fastness to overpainting in a common water born base coat (full shade) with a final pigment ratio of 1:1.

Amongst others this criteria is important for use of the pigment compositions in high performance automotive coatings.

Preparation of the water born base paints (s. Table 1)

A defined millbase of each pigment is dispersed for 60 min in a dispersing device with 3 mm glass beads. After dispersion a required quantity of clear compensation lacquer is added. The composition is shaken for further 5 min to get a homogenous mixture and is then adjusted to the scheduled full shade concentration with clear adjustment lacquer. Again the mixture is shaken for 5 minutes to achieve homogeneity. The finished full shade lacquer is filtered of from the glass beads and finally centrifuged for 10 sec for rapid defoaming. The single pigmented full shade lacquers are combined so that the target pigment ratio of 1:1 is achieved in the finally tested lacquers, which are again shaken for 10 min to assure complete homogeneity.

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Table 1: Pigment concentrations

Used for the following pigments:	P.Y. 138 P.Y. 213	P.Y. 184
% Pigment in the mill base	30.00	50.00
For dispersing		
Water-based paint dispersion medium 16%	20.90	14.90
Agitan 701/100%	0.10	0.10
Pigment	9.00	15.00
Mill base	30.00	30.00
For step-by-step let down		
1st step/intermediate adjustment clear compensation lacquer 24.2%	43.60	31.09
Intermediate adjustment	73.60	61.09
% Pigment in the intermediate adjustment	~12.27	24.55
2nd stage/final adjustment		
Taken from the intermediate adjustment	50.00	-----
Clear adjustment lacquer 24.7%	26.43	1.41
Total	76.43	62.50
% Pigment in the final adjustment/full shade	8.00	24.00
Part used for final tested pigment combinations	3	1

Preparation for testing:

The full shade lacquers with the defined pigment ratios of 1:1 are drawn down next to one another on a glass plate at a 150 µm wet film thickness using a four fold film applicator with approx. ¼ of the upper half of the glass plate remaining clear. After a flash off time of 20 minutes, the paint drawdowns are force-dried for 20 minutes at 100 °C. Afterwards the glass plate is turned through 180°. A white paint is coated. ¾ of the total surface, including the ¼ area kept free, with a wet film thickness of 200 µm using the film applicator. The white paint is flashed off for 20 minutes at room temperature, then forced-dried for 20 minutes at 120 °C in a drying oven.

Subsequently, a stoving clear varnish is applied to 2/3 of the area coated with the white paint by means of a spraying device (approx. 40 µm dry) and, after flash-off, is stoved for 30 minutes at 140 °C and additionally stoved at 160°C in the drying cabinet.

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Assessment:

The fastness to overpainting (staining) is measured by a spectrophotometer based on the dE values (total color difference, CIELAB system) between the white overpainted, coating of the particular pigment composition and a white coating.

Results:

Pigment composition Ratio 1/1	dE values	
	140°C	160°C
P.Y. 184 / P.Y. 138	2,45	2,69
P.Y. 184 / P.Y. 213	0,78	0,83
P.Y. 53 / P.Y. 175	7,83	12,56
P.Y. 53 / P.Y. 213	0,80	0,91
P.Br.24 / P.Y. 154	7,24	14,35
P.Y. 184 / P.Y.139	1,47	1,59

Conclusion:

The pigment combinations protected by the instant patent application show significant less bleeding into the white overpainted coating which is shown by the lower dE values.

Applicant's showing of unexpected results for the claimed combination is clear evidence that Applicant's claimed combination which is not disclosed in the cited prior art is also not the result of optimization of previously disclosed ranges. Therefore, any rejection based on In re Peterson 65 USPQ2d 1379 (CAFC 2003), as well as In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997), In re Woodruff, 16 USPQ2d 1934 (CCPA 1976) or In re Malagari 182 USPQ 549 553(CCPA) 1974) and MPEP 2144.05 is improper and should be withdrawn.

Thus, no one skilled in the art, armed with the Reisacher Patent would be motivated to arrive at Applicant's combination, and no one skilled in the art at the time of Applicant's invention, armed only with the disclosure of Reisacher would expect the remarkably superior performance of the claimed combination. Therefore, the rejection of claim 1 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6284035 to Reisacher et al. should be withdrawn for the reason that the

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determination of obviousness must be based on facts and not on unsupported generalities. The rejection of claims 5-13 under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6284035 to Reisacher et al. should be withdrawn for the reasons given in support of claim 1 from which claims 5-13 depend.

Claims 1 and 5-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over PCT International Application No. WO 02/055610. The rejection of claim 1, as amended, under 35 U.S.C. §103(a) as being unpatentable over PCT International Application No. WO 02/055610 should be withdrawn for the reason that the WO publication discloses that at least one of the organic pigments in a yellow pigment combination must be a benzimidazolone moiety. As amended claim 1 does not recite any organic pigments which are of the benzimidazolone type. Applicant's pigment under formula 1 does not contain a benzimidazolone moiety. PY 213 is a quinoxalinedione, and PY 214 is a diazo pigment with a different structure. Therefore the rejection of claim 1, as amended, under 35 U.S.C. §103(a) as being unpatentable over PCT International Application No. WO 02/055610 should be withdrawn for the reason that the PCT International Application No. WO 02/055610 teaches away from Applicant's invention, and for the reason that as shown herein above, Applicant has shown unexpected and remarkably improved performance. The rejection of claims 5-13, under 35 U.S.C. §103(a) as being unpatentable over PCT International Application No. WO 02/055610 should be withdrawn for the reasons given in support of amended claim 1, from which they depend.

Claims 1, 7-8, 10-11 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Specification No. JP 2003-232914. The rejection of claim 1, as amended, under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Specification No. JP 2003-232914 should be withdrawn for the reason that this rejection is moot in view of Applicant's amendment.

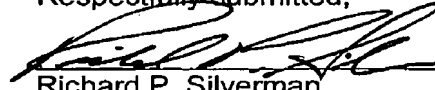
It is respectfully submitted that, in view of the above remarks, the restriction requirement has been met and the objections to the claims and the claim rejections under 35 U.S.C. §112, and §103 should be withdrawn and that this application is in

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a condition for an allowance of all pending claims. Accordingly, favorable reconsideration and an allowance of all pending claims are courteously solicited.

An early and favorable action is courteously solicited.

Respectfully submitted,



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